

## REMARKS

Claim 27 has been added. Support may be found in the Example 2, page 19. No new matter has been added. Entry is requested.

Claims 1-3, 8, 10, 12, 13 and 22-25 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Mehaffy et al. (EP 0934990A1).

Claims 5 and 26 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 (a) as being obvious over Mehaffy et al.

Claims 4 and 9 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Mehaffy et al.

Mehaffy is cited as disclosing a low application temperature adhesive that is applied at or below 200°F and wherein the bonded adhesive heat stress value and the adhesive application temperature are separated by 100°F or less. While the examiner acknowledges that the difference in the application temperature and the heat stress values reported in Table I are separated by more than 110°F, the examiner refers to paragraphs 0008 and 0033 of Mehaffy to support his position. Applicants disagree.

Applicants submit that the examiner has misinterpreted the Mehaffy disclosure. While it is true that Mehaffy's paragraphs 0008 and 0033 recite that hot melt adhesives can be applied at temperatures between 200° to 300°F, there is no disclosure, suggestion or exemplification that adhesives applied throughout this range will have a bonded heat stress value that is separated from the application temperature by not more than 110°F. Paragraph 0033 of Mehaffy discloses adhesives that possess excellent heat stability as characterized by the 200 hour 250°F thermal stability test. It also discloses that some formulations show thermal stability up to 400 hours at 250°F. It further discloses that a bond formed by 2 pieces of corrugated case substrate held together by a  $\frac{1}{2}$ " by 2" compressed bead can maintain a cantilever stress load of 2 to 2.5 psi for 24 hours at temperatures at or above 115°F, which correspond to the heat stress measurement (as referenced in paragraph 0042) of the adhesive samples (see, in particular, Sample III) reported in Table I. The adhesives reported in Table I have heat stress values vary

from 115-125°F when the adhesive is applied at 250°F. Hence, Mehaffy's paragraph 0033 and Table I demonstrate the heat stress values when the adhesive is applied at 250°F, not 200°F. The Examiner's apparent position that that heat stress values reported in Table I are not dependent on the application temperature is without merit. It is well known in the art that the heat stress values are dependent upon the application temperature. Although Mehaffy's adhesive has a heat stress value of 115°F when applied at 250°F, a skilled artisan would recognize that the heat stress value would differ when the same adhesive is applied at 200°F. A skilled artisan understands that as the application temperature of an adhesive decreases, the heat stress value also decreases. Hence, the difference between the heat stress value and the adhesive application temperature would be greater than 110°F if Mehaffy's adhesives are applied at temperature lower than 250°F.

In contrast to Mehaffy's adhesives, applicants' have shown that adhesives can be formulated that can maintain a temperature separation of 110°F or less between the application temperature and the adhesive heat stress value. The Examiner's position that Mehaffy discloses the *same adhesive composition* as the instant application and thus will have the same heat stress value is also without merit. Mehaffy fails to teach any hot melt adhesive composition that is applied at or below 300°F and wherein the bonded adhesive heat stress value and the adhesive application temperature are separated by 110°F or less. Applicants adhesives are neither anticipated by nor obvious over the disclosure of Mehaffy.

Withdrawal of the Section 102 and Section 103 rejections of the claims over the Mehaffy reference is requested.

Claims 6 and 7 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Mehaffy et al. in view of Baetzold et al. (U.S. 5,827,913). Baetzold is directed to encapsulating an ingredient in a hot melt adhesive composition. Baetzold teaches that the encapsulated ingredient may be any known hot melt adhesive formulation ingredient or additive such as antioxidants and fragrances (abstract). The disclosure of Baetzold adds nothing to the disclosure of Mehaffy which would motivate the skilled artisan to formulate an adhesive that can be applied at a low temperature and which are able to withstand stress

at temperatures substantially closer to the temperature of the adhesive's application temperature than heretofore achieved in the art. Withdrawal of the Section rejection based on Mehaffy in view of Baetzold is requested.

Applicants submit that the claimed invention represents an important and patentable contribution to the art. Favorable action is requested.

Respectfully submitted,



Sun Hee Lehmann  
Reg. No. 58,338

February 26, 2007

National Starch and Chemical Company  
P. O. Box 6500  
Bridgewater, New Jersey 08807-0500  
Telephone No.: 908-575-6869